

**RECORD OF TELEPHONE INTERVIEW**

This reissue application was filed September 8, 2003 with a Preliminary Amendment which resulted in the application including original claims 1-13 and new claims 14-19. The Office Action states that claims 14-19 are pending, overlooking original claims 1-13. During a telephone interview January 27, 2005, Examiner Roger L. Pang agreed that claims 1-19 were pending in the application at the time of the preparation of the Office Action, and that claims 1-13 were not rejected. Thus, only the rejections of claims 14-19 are at issue.

**REMARKS**

As a result of the above amendments, claims 1-14 and 16-19 are presently pending in the application. The substance of dependent claim 15 has been incorporated into its parent independent claim 14, and claim 15 has been canceled. Claims 16-18 have been amended to be dependent from amended claim 14. Claim 19 remains dependent from claim 18.

The Office Action points out that in the Preliminary Amendment filed with this reissue application on September 8, 2003 the newly added claims were not presented properly, in that they should have been underlined. This is done in the claims as presented above. If there remains a problem in this respect, the Examiner is requested to telephone the undersigned attorney to resolve the matter.

Claim 14 was rejected under 35 U.S.C. § 102(b) as being anticipated by Ishimaru (U.S. Patent No. 5,847,218). Claims 15-19 were rejected under 35 U.S.C. § 112, first paragraph, with the contention that they fail to comply with the enablement requirement. These rejections are respectfully traversed.

## **I. THE CLAIMED INVENTION**

The claimed invention is directed to a transmission device of a four-wheel drive vehicle. In an exemplary embodiment, the transmission device includes an input shaft connected to an engine for transmitting a driving force; a hollow counter shaft extended in parallel to the input shaft; shift gear trains provided between the input shaft and the hollow counter shaft; a first output shaft disposed in a hollow portion of the hollow counter shaft for transmitting the driving force to a final reduction gear of the front wheels or the rear wheels of the vehicle; a first drive gear disposed at an end portion of the counter shaft; a first driven gear engaging with the first drive gear and rotating about a rotating axis of the input shaft; a second drive gear rotated about the rotating axis of the input shaft; a second driven gear disposed at a base end side of the first output shaft and engaging with the second drive gear; a second output shaft coupled with one of the first driven gear and the second drive gear to transmit the driving force to a final reduction gear of the other one of the front and rear wheels; and a variable mechanism for varying a torque transmitting capacity. Either the second output shaft is coupled with the first driven gear through the variable mechanism, or the second drive gear is coupled with the first driven gear through the variable mechanism.

## **II. THE 35 U.S.C. §112, FIRST PARAGRAPH REJECTION**

Claims 15-19 were rejected under 35 U.S.C. §112, first paragraph, with the contention that they fail to comply with the enablement requirement. This rejection is traversed.

Claim 15 stated, and now claim 14 states, that either the second output shaft is coupled with the first driven gear through the variable mechanism, or the second drive gear is coupled with the first driven gear through the variable mechanism. Claim 17 states that the second drive gear is coupled with the first driven gear through the variable mechanism. The Office Action contends that “the second drive gear is coupled with the first driven gear

through the variable mechanism” is not taught within the original disclosure, but that the second drive gear is integral with the first driven gear. This contention and this rejection are traversed. There is adequate teaching of the second drive gear being coupled with the first driven gear through the variable mechanism.

Referring to the specification and the drawings, in the first embodiment, as illustrated in Figures 1 and 2, the intermediate output shaft is shaft 21, the first drive gear is gear 23, the first driven gear is gear 25, the second drive gear is gear 26, the second driven gear is gear 24, the second output shaft is rear drive shaft 22, and the variable mechanism is torque coupling device 27. See the specification at column 5, lines 21-44. The specification at column 5, lines 35-39 and the drawings in Figures 1 and 2 teach that, in the first embodiment of the invention, first driven gear 25, intermediate output shaft 21, and second drive gear 26 are integrally formed.

At column 5, lines 40-44, the specification states:

“The rear end side of the intermediate output shaft 21 is coupled with the front end of the rear drive shaft 22 through a torque coupling device 27, such as a viscous coupling. The torque coupling device 27 acts as a variable means constituting the main portion of a center differential device.”

Since the first driven gear 25 and the intermediate output shaft 21 are integrally formed, and the intermediate output shaft 21 is coupled with the rear drive shaft 22 through the variable means of the torque coupling device 27, in this exemplary embodiment the second output shaft 22 is coupled with the first driven gear 25 through the variable mechanism of torque coupling device 27.

In the third embodiment, as illustrated in Figures 4 and 5, again the intermediate output shaft is shaft 21, the first drive gear is gear 23, the first driven gear is gear 25, the second drive gear is gear 26, the second driven gear is gear 24, and the second output shaft is rear drive shaft 22. In this embodiment, the variable mechanism is torque coupling device

40. See the specification at column 5, lines 21-39 and at column 7, lines 1-19. Again, first driven gear 25, intermediate output shaft 21, and second drive gear 26 are integrally formed.

At column 7, lines 15-19, the specification states:

“That is, the rear end side of an intermediate output shaft 21 is coupled with the front end side of a rear drive shaft 22 through a wet-type hydraulic multiple disk clutch (transfer clutch) 40 as the variable drive means constituting the main portion of a center differential device.”

Since the intermediate output shaft 21 and the first driven gear 25 are integrally formed, the second output shaft 22 is coupled with the first driven gear 25 through the variable mechanism -- in this exemplary embodiment wet-type hydraulic multiple disk clutch 40.

Turning to the second embodiment, as illustrated in Figure 3, the first drive gear is gear 31, the first driven gear is gear 33, the second drive gear is gear 34, the second driven gear is gear 32, the second output shaft is rear drive shaft 35, and the variable mechanism is torque coupling device 36. See the specification at column 6, lines 20-36.

At column 6, lines 31-36, the specification states:

“Besides, the transfer driven gear 33 is coupled with the reduction gear 34 through a torque coupling device 36, such as the viscous coupling, as the variable means constituting the main portion of the center differential device, and a front engine-rear drive (FR) based four-wheel drive vehicle is constructed.” [Emphasis added.]

Since transfer driven gear 33 is the first driven gear and reduction gear 34 is the second drive gear, this teaches that the second drive gear is coupled with the first driven gear through the variable mechanism.

It is accordingly submitted that the specification and drawings adequately enable the claimed invention of original claims 15 and 17, and now amended claim 14.

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw this rejection.

### III. THE 35 U.S.C. §102 REJECTION

Independent claim 14 was rejected under 35 U.S.C. § 102(b) as being anticipated by Ishimaru, U.S. Patent No. 5,847,218. No prior art rejections were made as to dependent claims 15-19.

Ishimaru discloses a power take-off transmission for a working vehicle (see Figures 3 and 4). The Examiner asserts that Ishimaru's power take-off transmission includes an input shaft (what the Examiner analogizes to first running shaft 41) connected to an engine for transmitting a driving force; a hollow counter shaft (what the Examiner analogizes to second running shaft 42) extended in parallel to the input shaft 41; shift gear trains (what the Examiner analogizes to 41a, 41b, 41c, 55-58, 60a, 60b) provided between the input shaft 41 and the hollow counter shaft 42; a first output shaft (what the Examiner analogizes to fourth running shaft 44) disposed in a hollow portion of the hollow counter shaft 42 for transmitting the driving force to a final reduction gear of either the front wheels or the rear wheels; a first drive gear 54 disposed at an end portion of the counter shaft 42; a first driven gear 55 engaging with the first drive gear 54 and rotating about a rotating axis of the input shaft 41; a second drive gear 58 rotated about the rotating axis of the input shaft 41; a second driven gear 60a disposed at a base end side of the first output shaft 44 and engaging with the second drive gear 58; and a second output shaft (what the Examiner analogizes to differential yoke shaft 27a) coupled with the first driven gear 55 and the second drive gear 58 to transmit the driving force to a final reduction gear of the other one of the front and rear wheels.

However, Ishimaru's power take-off transmission does not include a variable mechanism for varying a torque transmitting capacity. Consequently, in Ishimaru's power take-off the second output shaft is not coupled with the first driven gear through the variable mechanism, and the second drive gear is not coupled with the first driven gear through the variable mechanism.

Ishimaru's power take-off is capable of only three operations -- high speed, low speed, and reverse. See Ishimaru at column 5, lines 13-52. The variable mechanism of the claimed invention permits more varied operation.

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This feature of Applicant's invention was presented in original dependent claim 15 and has been incorporated into independent claim 14. Thus, claim 14 distinguishes patentably from Ishimaru and is allowable, as are dependent claims 16-19.

The Office Action comments that the oath may not be specific enough, as the Applicant is required to point out exactly where the specification supports the amended claims. This has been done above. Thus, Applicant submits that the oath is sufficient.

#### **IV. FORMAL MATTERS**

The Office Action does not indicate that the formal drawings are acceptable. It is requested that their acceptability be acknowledged.

#### **V. CONCLUSION**

In view of the foregoing, Applicant submits that claims 1-14 and 16-19, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

To the extent necessary, Applicant petitions for an extension of time under 37 C.F.R. §1.136. The Commissioner is hereby authorized to charge any deficiency in fees,

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including extension of time fees, or to credit any overpayment in fees to Attorney's Deposit

Account No. 50-0481.

Date: 3/1/05

Respectfully Submitted,



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